

(19) World Intellectual Property
Organization
International Bureau



(43) International Publication Date
20 January 2005 (20.01.2005)

PCT

(10) International Publication Number
WO 2005/006205 A1

(51) International Patent Classification⁷:
G06B 19/18, G06F 7/00, H04L 12/26

G06F 15/16,

(74) Agent: **OBSHESTVO S OGRANICHENNOI
OTVETSTVENNOSTJU "SOJUZPATENT"**; ul. Ili-
inka 5/2, Moscow, 103735 (RU).

(21) International Application Number:

PCT/RU2003/000306

(81) Designated States (*national*): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, SD, SE, SG, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZM, ZW.

(22) International Filing Date: 15 July 2003 (15.07.2003)

(25) Filing Language: English

(26) Publication Language: English

(71) Applicant (*for all designated States except US*): **INTEL, ZAKRYTOE AKTSIONERNOE OBSHESTVO** [RU/RU]; Chapaevsky per., 14, Sokol-10 Business Center, Moscow, 125252 (RU).

(84) Designated States (*regional*): ARIPO patent (GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

(72) Inventors; and

(75) Inventors/Applicants (*for US only*): **ZHELTON, Sergei Nikolaevich** [RU/RU]; ul. Turgeneva, 30, Nizhny Novgorod, 603950 (RU). **BRATANOV, Stanislav Viktorovich** [RU/RU]; ul. Turgeneva, 30, Nizhny Novgorod, 603950 (RU). **BELENOV, Roman Alexeevich** [RU/RU]; ul. Turgeneva, 30, Nizhny Novgorod, 603950 (RU). **KNYAZEV, Alexandr Nikolaevich** [RU/RU]; ul. Turgeneva, 30, Nizhny Novgorod, 603950 (RU).

Published:

— with international search report

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

(54) Title: A METHOD OF EFFICIENT PERFORMANCE MONITORING FOR SYMMETRIC MULTI-THREADING SYSTEMS

(57) Abstract: Efficient performance monitoring for symmetric multi-threading systems is applicable to systems that have limited performance monitoring resources and enables efficient resource sharing on a per-execution unit basis. The performance monitoring unit being shared is programmed to reset its counter and to start performance monitoring operation if there is only one execution unit requesting this operation. In case there are several requests pending, an attempt is made to program the performance monitoring unit to collect performance data for a subset of execution units the hardware is capable to support. Upon a request to stop performance monitoring operation the previously allocated indicator may be removed, and the performance monitoring unit may be programmed to stop operating if there are no more active or pending requests. In case the performance monitoring was inactive for the current execution unit, this request may be discarded, and no performance data may be returned.

WO 2005/006205 A1